

Noxious and Invasive Weed Management

Noxious and Invasive Weed Management

V(A). Planned Program (Summary)

1. Name of the Planned Program

Noxious and Invasive Weed Management

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
213	Weeds Affecting Plants	20%		0%	
215	Biological Control of Pests Affecting Plants	40%		0%	
216	Integrated Pest Management Systems	40%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	4.0	0.0	0.0	0.0
Actual	4.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
112000	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
168000	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

•Develop presentation materials •Develop resource material •Provide workshops and field tours •Translate scientific materials into lay materials •Develop demonstration and research trials •Evaluate effectiveness of activities

2. Brief description of the target audience

•Private land managers, including livestock producers •Public land managers •4-H youth •Government agency personnel •Conservation groups

V(E). Planned Program (Outputs)**1. Standard output measures****Target for the number of persons (contacts) reached through direct and indirect contact methods**

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	200	2000	0	0
2007	377	1570	0	0

2. Number of Patent Applications Submitted (Standard Research Output)**Patent Applications Submitted****Year Target****Plan:** 0

2007: 0

Patents listed**3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	Extension	Research	Total
Plan			
2007	1	0	1

V(F). State Defined Outputs**Output Target****Output #1****Output Measure**

- {No Data Entered}

Not reporting on this Output in this Annual Report

Year	Target	Actual
2007	{No Data Entered}	{No Data Entered}

V(G). State Defined Outcomes

O No.	Outcome Name
1	Number of individuals receiving training and education
2	Number of individuals demonstrating increase in subject knowledge and skills
3	Number of producers implementing recommended actions or practices
4	Number of producers participating in government cost share programs for range conservation
5	Estimated cost savings and return for North Dakota landowners implementing an integrated pest management program (\$/acre)
6	Reduce number of noxious weed acres by two to five percent annually in North Dakota

Outcome #1**1. Outcome Measures**

Number of individuals receiving training and education

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	200	377

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Noxious and invasive weeds have a direct economic and ecological impact on range and pastureland. These weeds reduced forage production, thus livestock production potential, resulting in an economic drain to the livestock sector. Ecologically, noxious and invasive weeds reduce the integrity of the natural resource, reducing the soil and plant community value for health, esthetics, and wildlife habitat.

What has been done

We developed training sessions and workshops for livestock producers and land managers to enhance the knowledge of the management and plant identification. A total of 10 educational opportunities were developed and conducted, as well as four popular press interviews or news stories.

Results

We achieved a direct impact on 377 individuals and indirect impact on almost 16,000 individuals. We felt we had a direct impact on 13,350 acres.

4. Associated Knowledge Areas

KA Code	Knowledge Area
213	Weeds Affecting Plants
215	Biological Control of Pests Affecting Plants
216	Integrated Pest Management Systems

Outcome #2**1. Outcome Measures**

Number of individuals demonstrating increase in subject knowledge and skills

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	97

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Noxious and invasive weeds have a direct economic and ecological impact on range and pastureland. These weeds reduced forage production, thus livestock production potential, resulting in an economic drain to the livestock sector. Ecologically, noxious and invasive weeds reduce the integrity of the natural resource, reducing the soil and plant community value for health, esthetics, and wildlife habitat.

What has been done

Two and three day intensive training sessions were conducted to provide intensive training to livestock producers and private/public land managers. Four workshops were conducted with 97 participants.

Results

These four workshops had a direct impact on 11,300 acres and an indirect impact on as much as 200,000 acres.

4. Associated Knowledge Areas

KA Code	Knowledge Area
216	Integrated Pest Management Systems
213	Weeds Affecting Plants
215	Biological Control of Pests Affecting Plants

Outcome #3**1. Outcome Measures**

Number of producers implementing recommended actions or practices

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	20	35

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Noxious and invasive weeds have a direct economic and ecological impact on range and pastureland. These weeds reduced forage production, thus livestock production potential, resulting in an economic drain to the livestock sector.

What has been done

Two one-on-one workshops were conducted to land managers. One was a three-day workshop and one a single day workshop.

Results

We impacted 35 individuals who incorporated weed control practices on an estimated 10,800 acres.

4. Associated Knowledge Areas

KA Code	Knowledge Area
215	Biological Control of Pests Affecting Plants
213	Weeds Affecting Plants
216	Integrated Pest Management Systems

Outcome #4**1. Outcome Measures**

Number of producers participating in government cost share programs for range conservation

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	50	32

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Numerous federal and state government agencies have provided incentives through government cost-sharing programs. Livestock producers are interesting in learning and using these incentive programs and matching dollars to improve their range management practices and livestock production per given land base.

What has been done

Sixteen educational programs were conducted in collaboration with the Natural Resources Conservation Service and North Dakota State University Extension Service for private land managers.

Results

Over 600 livestock producers participated in these workshops and training sessions, with over 30 landowners known to have participated and incorporate cost-sharing programs.

4. Associated Knowledge Areas

KA Code	Knowledge Area
216	Integrated Pest Management Systems
215	Biological Control of Pests Affecting Plants
213	Weeds Affecting Plants

Outcome #5**1. Outcome Measures**

Estimated cost savings and return for North Dakota landowners implementing an integrated pest management program (\$/acre)

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	5	3

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Noxious and invasive weeds have a direct economic impact on range and pastureland. These weeds reduced forage production, thus livestock production potential, resulting in an economic drain to the livestock sector. The average cost for controlling weeds is approximately \$12/ac using traditional techniques, thus creating a cost return at and above these costs of a minimum of \$3.

What has been done

We developed training sessions and workshops for livestock producers and land managers to enhance the knowledge of the management and plant identification. A total of 10 educational opportunities were developed and conducted, as well as four popular press interviews or news stories.

Results

Noxious and Invasive Weed Management

We provided options for controlling and managing noxious and invasive weeds that provided a net gain in return from the livestock sector above the input costs of a minimum of \$3 and as great as \$20.

4. Associated Knowledge Areas

KA Code	Knowledge Area
216	Integrated Pest Management Systems
213	Weeds Affecting Plants
215	Biological Control of Pests Affecting Plants

Outcome #6

1. Outcome Measures

Reduce number of noxious weed acres by two to five percent annually in North Dakota

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	2	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Noxious and invasive weeds have a direct economic and ecological impact on range and pastureland. These weeds reduced forage production, thus livestock production potential, resulting in an economic drain to the livestock sector. Ecologically, noxious and invasive weeds reduce the integrity of the natural resource, reducing the soil and plant community value for health, esthetics, and wildlife habitat.

What has been done

We developed training sessions and workshops for livestock producers and land managers to enhance the knowledge of the management and plant identification. A total of 10 educational opportunities were developed and conducted, as well as four popular press interviews or news stories. We also developed a colored pictorial publication for weed identification and management options, distributing almost 10,000 copies state wide in North Dakota.

Results

Surveys by the North Dakota Agriculture Department show a continued reduction of noxious weeds by at least 2%, and as much as 4%.

4. Associated Knowledge Areas

KA Code	Knowledge Area
215	Biological Control of Pests Affecting Plants
213	Weeds Affecting Plants
216	Integrated Pest Management Systems

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Government Regulations
- Competing Public priorities

Brief Explanation

V(l). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Retrospective (post program)
- During (during program)

Evaluation Results

Key Items of Evaluation